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ABSTRACT

Speech teachers and singing teachers have much in common. Both attempt in their teaching to develop the most powerful and effective instrument possible while trying to avoid vocal problems. Both have studied the physiology of the vocal mechanism to assist them in their teaching. Both are concerned with the expressive qualities of the voice as well as its beauty. Both seek to develop the student's natural voice rather than an artificial imitation of some master speaker or singer. Teachers of the singing voice have developed techniques to increase resonance and power while avoiding harm to the vocal mechanism. These techniques are based on scientific principles developed from the study of vocal physiology. They allow the student to develop his or her natural voice to the highest level of technique, freeing the voice to be more expressive. These techniques have application for training of the speaking voice as well. Includes exercises for developing the voice are attached. (Contains 18 references.) (RS)

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Training the Speaking Voice Through Singing

Kenneth L. Sipley

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Speech teachers and singing teachers have much in common. Both attempt, in their teaching, to develop the most powerful and effective instrument possible while trying to avoid vocal problems. Both have studied the physiology of the vocal mechanism to assist them in their teaching. Both are concerned with the expressive qualities of the voice as well as its beauty. Both seek to develop the student's natural voice rather than an artificial imitation of some master speaker or singer.

Teachers of the singing voice have developed techniques to increase resonance and power while avoiding harm to the vocal mechanism. These techniques are based on scientific principles developed from the study of vocal physiology. They allow the student to develop her or his natural voice to the highest possible level of technique, freeing the voice to be more expressive. These techniques have application for training of the speaking voice as well.

It is important to remember that the vocal mechanism, like all other systems of the body, operates by muscle power. The muscles used in breathing, phonation, and articulation are all involved in producing the singing and speaking voice. During singing, breath must be rationed so the tone can be sustained. The vocal folds are activated for prolonged periods of time as vowels are elongated. Facial muscles must operate efficiently, and rapidly to produce crisp, precise consonants. All of these conditions are necessary for speech as well, with the exception of the elongation of vowel sounds.

Principles of Vocal Development

There are some basic principles of vocal development for singers which might well be adopted by teachers of the speaking voice and included in classes for speech majors, drama majors, radio and television majors, and others who use the speaking voice professionally. These principles are based on a logical progression of muscle development from gross muscles to successively smaller muscles. The progression is as follows:

posture

breath management

relaxation

phonation

registration

resonance

articulation

There are two reasons for using this progression in working with voices. First, it begins with the large skeletal muscles (posture) and works sequentially to the smallest muscles involved in vocal production (articulation), (Westerman, 1955). Second, it places "relaxation" as a step between "breath management" and "phonation." Since the life style of so many of today's students is tension-filled, the relaxation of muscles which interfere with free phonation must be a component of a program of vocal instruction.

Following the list of sources is a group of exercises which the author has used successfully to improve the quality of voices. It is hoped that they will be helpful to the reader.

Posture

Posture forms the basis for all vocal development. If the instrument is to be used efficiently it must be held correctly. "Before learning to play any instrument one should learn how to hold it" (Vennard, 1967, p. 19). Mabry (1992) also advocates learning how to hold the instrument first. Telling students to maintain tall ribs, a tall neck, and "leaning up" are better methods of eliminating tension than telling them to stand up straight (p. 31).

There are two sets of muscles in the throat (an oversimplification, but one that helps with understanding). One set is involved with chewing and yawning (the depressor muscles). The other set is involved with swallowing (the elevator muscles) The depressor muscles lower the larynx, which is the position best suited for relaxed, easy singing. The elevator muscles raise the larynx. A forward head position deactivates the work of the depressor muscles, and emphasizes the work of the elevator muscles. To counteract any tendency to push the head forward, Mabry suggested thinking of "balancing a basketball on a broomstick" (p. 31).

Breath Management

Various terms are used to describe the act of respiration as it is applied to singing or public speaking. Some of these are "support", "control," and "pressure." The term "breath management" (Corbin, 1986, p.5) seems to be the most representative of the actual act of respiration which the process of singing requires, although the term "support" is useful in discussing the work of the "breath ring" during phonation.

Breath is the motor of the vocal mechanism. Breath management is the process by which air is used most effectively for the sustained sound needed for singing or public speaking. No sound can be made in the larynx without breath. The key to vocal success is not increased vocal force, but more breath support Singers and actors who have been trained correctly increase the intensity of the voice by increasing subglottal pressure and airflow rate, with only a minimal (if any) increase in glottal tension (Boone & McFarlane, 1994)

Breathing involves expansion of the rib cage at the sides, in front, and in back (Huls, 1957). Students must learn that breathing for singing or speaking is as natural and free as breathing for life. Ehmann spoke of the "breath ring," the circular area around the floating ribs (1968, p. 16). Vennard advocated the sensations of "in," "down," and "out" as being representative of proper breathing. The student breathes *in* (through the nose and mouth), *down* (into the lungs), and *out* (the rib cage expands outwards).

The student must not exaggerate the intake of air (Miller, 1986). If she or he crowds the lungs by taking too much air, a quicker rate of expiration will occur. The student should take an easy, relaxed breath and replenish the air she or he has used. Instead of a yawning inhale (which leads to tension at the end of the yawn) inhale as though smelling a rose. This will give the student a feeling of an open, relaxed throat (pharyngeal cavity).

Two to three pints of air are sufficient to sing or speak even long phrases or sentences (fifteen to twenty seconds). Since the lung capacity can be as much as four quarts during deep breathing (the breathing used for singing or public speaking), it is not necessary to inhale to the point of crowding the lungs. Efficiency is more important than capacity. The object is to keep the ribs up and out so the abdominal muscles can work efficiently for steady expiration.

Any attempt to control the movement of the diaphragm will result in unnecessary and undesirable muscular tension in the breathing apparatus, which will have a negative effect on the tone quality. Too much air support in order to achieve a larger sound will tire the throat muscles and produce tension in the tongue and soft palate (Doscher, 1991). This could well lead, eventually, to serious vocal problems such as chronic hoarseness and vocal nodules.

Rib and abdominal breathing is preferable to chest breathing. Chest, or clavicular breathing, is similar to the breathing pattern used by out-of-breath athletes. During this type of breathing, phonation is uncontrolled. The student should place one hand on the lower (floating) ribs and one hand on the abdomen to check for rib and abdominal breathing. This will allow the student to feel the floating ribs move out during inhalation.

Breath support (management) is important for free, relaxed singing or speaking. When breath is totally responsible for the support of the voice (no pressure from the shoulders, neck, jaw, or eyebrows) the result will be free, flexible, vocal production (Wilson, 1991). The quality of the voice depends upon the quality of the breath taken by the singer or speaker (Boardman & Alt, 1992).

Relaxation

In order for the vocal mechanism to produce a free and natural tone, there must be a feeling of relaxation in those muscles in which the presence of tension might impede correct use of the voice. The secret of normal voice function is not the relaxation of all muscles, but the

use of the correct muscles with the correct degree of tension (Brodnitz, 1953).

The majority of voice problems are the result of exaggerated muscle activity. Sensation in the larynx probably means tension in the larynx. The larynx must be freed of all unnecessary muscle tension in order to allow it to function efficiently. Pressure in the throat will interfere with the production of a beautiful, resonant sound People who have to speak louder than conversational speech, and who have not been trained otherwise, tend to squeeze the glottis rather than make use of the large muscles involved in the breath mechanism. Speakers should experience only minimal laryngeal movement, singers almost none (Boone & McFarlane, 1994).

In addition to a relaxed feeling in the laryngeal area, it is necessary to relax the muscles of the tongue and lower jaw. A relaxed tongue and a flexible lower jaw will allow the muscles of the throat to function properly. There must be complete mobility of the jaw, tongue, and lips. Dropping the jaw prevents tightening the throat. A chewing motion will help relax the jaw and tongue.

Relaxation is active, not passive. The student must not be lazy, but relaxed. Lazy vocal production is the enemy of good vocal quality. Much of the action of expiration is passive (Boone & McFarlane, 1994). This is why untrained singers and speakers tend to use so much muscle energy in the production of their voices. The goal for singers and speakers is to produce an energetic voice without unnecessary muscle tension.

Phonation

Only when the muscles involved in vocal production are free to function properly can accurate, natural phonation (the initiation of sound) occur. Phonation should be free and easy, with no unnecessary tensing of muscles to produce a sound. In fact, taking the "work" out of phonation is often a primary task in voice therapy (Boone & McFarlane, 1994). There is no conscious feeling of muscle action in the effective singing or speaking voice.

Correct vocal fold position for the commencement of phonation cannot be achieved through conscious effort (Miller, 1986). Any sensation in the larynx probably means tension in the larynx. If the larynx is properly relaxed there should be little or no sensation.

Registration

Registration is a key process in training the singing voice. Singers must be able to blend the different registers of the voice in order to sing with a unified sound throughout their entire range. The pitch range of the speaking voice is limited as compared to the singing voice. Nevertheless, students who aspire to use their speaking voices professionally must be concerned with registration. Constantly speaking in either extreme of the speaking range will produce tension in the larynx which will lead to vocal problems.

It is important for any speaker or singer to use the vocal mechanism optimally with regard to

fundamental frequency. Speaking or singing at an inappropriate pitch level requires excessive force and contraction of the intrinsic muscles of the larynx, which leads to vocal fatigue or the hoarseness related to a tired vocal mechanism. An inappropriate pitch level, whether too low or too high, requires unnecessary muscle energy to maintain the necessary vocal fold adjustments of length and mass to produce the "artificial" voice (Boone & McFarlane, 1994, p.13).

Few students will force their voice too high in the speaking range. This usually occurs with people who are trying to speak or sing more loudly than is comfortable, and who raise the pitch as part of the loudness (Boone & McFarlane, 1994).

The more common problem is students forcing their voices into the lower part of the speaking range. Usually, this is the solution arrived at by students trying to develop a more powerful voice. Stage directors, radio and television producers, and speech teachers without a background in dealing with vocal faults frequently tell students that they need to develop a more powerful voice--usually suggesting that they lower the pitch of the speaking voice to achieve that end. The student responds by forcing the voice into the lower part of the range, thereby creating tension (strain) in the laryngeal area. If a more powerful voice is desired, the answer is not more force, or a lower voice, but more resonance.

Resonance

One of the most serious mistakes students can make is that of substituting volume for resonance. Voices need time and maturation to develop a resonant sound. Any shortcuts taken by the student to develop a more powerful voice may lead to serious vocal problems.

Teachers of singing have long known that they must study the method by which the body produces the voice if they are to serve their students well. Many have studied the anatomy of the voice, either first hand in the laboratory or through reading extensively in the field. They have learned that trying to take shortcuts in vocal training can be dangerous to the voices of their students.

Attempting to develop power in the voice without first developing acoustic resonance is, perhaps, the most common and dangerous shortcut. Singers, on their own or at the mercy of singing teachers without extensive knowledge of vocal anatomy and pedagogy, often abuse their voices to the extent of permanent vocal damage. This can also happen to those who try to develop powerful speaking voices without first concentrating on acoustic resonance. For example, females who participate in cheerleading for three years or longer are statistically at a higher risk of developing vocal dysfunction and a lack of vocal clarity (Bravender, 1977).

Since singers depend on acoustic resonance to project both the beauty and power of the voice, it would seem that an effective method for training the voice would be through singing. Those singers who have undergone years of training to develop their voices into beautiful instruments usually have effective speaking voices as well. The reverse is not necessarily true. Many persons who have fine speaking voices do not have beautiful or even

effective and powerful singing voices. Good actors often have extensive faults in their singing voices (Christy, 1961).

The larynx must not be forced down to produce an unnaturally "dark" sound. The student should not speak as if yawning and speaking at the same time. This sound is as undesirable as its extreme opposite--unnaturally raising the pitch of the voice by forcing the larynx into a too-high position. Proper inhalation should insure proper positioning of the larynx for properly resonant phonation. Resonance will improve when the larynx is in a low, relaxed position. Vennard (1967) proposed three methods for lowering the larynx:

a. the inhale,

b. the yawn (the beginning of a yawn), and

c. the reflex action after swallowing.

Dropping the jaw prevents tightening the throat and raising the larynx (refer to the section on "Posture"). A mellow tone feels "down" and "back," while a brilliant tone feels "up" and "forward" (Vennard, 1967, p. 120). The student must accomplish both simultaneously by balancing mellowness and brilliance. Too much mellowness (back resonance) makes the voice sound hollow and soft. Too much brilliance (front resonance) makes the voice piercing and strident. The student must achieve a perfect balance between back resonance and front resonance. The tone must have "focus in front" and "roundness and depth in back" (p. 215).

Each student must find the natural, comfortable pitch range of her or his voice and develop an acoustically resonant voice within that range. Both ends can best be met through humming. It is practically impossible to hum outside the comfortable pitch range of the voice. Almost invariably, when a student chooses a humming pitch she or he will be in the comfort range. More information on humming is available in the exercise section at the end of this article.

Westerman (1955) believed that resonance relieves strain and effort at the source of vibrations (the vocal folds). He suggested that the student should aim for a uniform amount of hum in the voice (throughout the comfortable humming range) to produce resonance on all vowels throughout the total speaking range. Zimmerman (1968) stated that tone cannot be forced into the resonating centers. It must be freed to find its own way there. She spoke of sensing vibration in the resonance centers (pharynx, mouth, and sinus cavities). Humming has proven to be a highly successful activity in achieving this goal.

Articulation

Proper articulation involves correct vowels separated by strong but non-interfering consonants. The quality which differentiates consonants from vowels is the noise factor. Vowels produce tone while most consonants produce noise. The exceptions are the

consonants "l," "m," "n," "v," and "z," on which sustained tone is possible. For consonants to be recognized as such, the noise must be exaggerated. This is the essence of speaking or singing words so clearly that they can be understood in a large hall.

High quality speaking or singing tone depends on beautiful vowel sounds. The development of free, relaxed, beautiful vowels must be the first task of the voice teacher (speaking or singing). Once students have begun to achieve quality vowel sounds the teacher can begin to concentrate on producing good consonant sounds.

Vocal Abuse

Any muscle can be overextended. When this happens it can lead to temporary strain and soreness. If the muscle is under continuous strain more severe problems can occur. Continuous strain over long periods can lead to a muscle which will not function properly. Put simply, hyperfunction can lead, eventually, to hypofunction.

The muscles involved in producing the voice are delicate, and can suffer strain easily. A hoarse throat is the first sign of muscle strain. The overused vocal muscles do not actually hurt, as do those of the arms and legs. In addition, tension in the vocal muscles can soon begin to feel normal: ". . .improper vocal production quickly becomes automatic and involuntary" (Boone & McFarlane, 1994, p. 18)

Using the voice for extended periods of time at a level which is too loud (such as yelling at a sporting event) makes the throat hoarse. Usually, a good night's rest will cure the hoarse throat and return the voice to normal function. Continuous yelling may lead to constant hoarse throats, and eventually to permanent loss of volume.

Using the voice outside of the comfortable pitch range (speaking or singing at a pitch level which is too high or too low) may also lead to hypofunction. Speaking (or singing) at too high a pitch will eventually lead to loss of the lower tones. Conversely, using only the lower part of the speaking voice will eventually lead to loss of the higher tones. In either case, the voice loses part of its natural range, causing it to be less expressive and flexible.

Linke (1953) found that female speaking voices show less frequency range and pitch variability than corresponding groups of male voices. His female subjects also employed median frequency levels located lower in the sustained tone range than males when speaking. He concluded that women in general tend to use median speaking pitch levels lower than would seem advisable for the most effective use of their voices. Linke concluded that the tendency for females to speak with unduly lowered pitch levels was due to social pressures, including the preponderance of low-pitched voices among female personalities of radio, movies, television, and stage.

Linke found three important detrimental effects of females speaking too low in their pitch range.

1. The expressiveness of the female speaking voice is lessened because of the reduced frequency variability associated with a lowered pitch level.

2. Females experience increased incidences of hoarseness due to using an abnormally low speaking pitch (raising habitual speaking frequency results in improved voice quality).

3. There are increased injurious effects due to vocal strain, such as vocal abuse, contact ulcers, and nodules.

While vocal abuse is a greater problem for females than for males (Stoer & Swank, 1978), both are at risk if they use their voices incorrectly for extended periods of time. Since teachers, actors, and radio and television personalities, as well as singers, use their voices much more frequently and at higher levels of intensity than the overall population, they are at greater risk of vocal abuse.

The first symptom of vocal abuse is strain. The student suffers from frequent soreness or hoarseness in the throat. If overnight rest will not cure the hoarseness or soreness, a laryngologist should be consulted.

Constant vocal strain may lead to contact ulcers. These are sore spots on the edges of the vocal folds, somewhat like blisters. Since there is no real pain associated with contact ulcers, the student may well be unaware of the seriousness of the problem. The usual cure for contact ulcers is prolonged, complete vocal rest--no use of the voice for periods of up to a year or longer.

The third and final stage of vocal abuse is vocal nodules, also known as "nodes." Nodules are growths on the vocal folds, not unlike calluses. They occur when the folds are under such constant pressure from forced use of the voice that the edges develop growths to protect the sore spots (contact ulcers). The usual sign of nodules is a breathy or hoarse-sounding speaking or singing voice caused by incomplete closure of the folds. Nodules do not usually respond to vocal rest, and must be removed surgically. Unless vocal habits undergo a complete change the nodules frequently grow back.

Training the Singing Voice

Is it possible to teach everyone to sing? Music educators claim that anyone can sing, but we all know people who "can't carry a tune in a bucket." Can everyone learn to sing in tune, with good tone and resonance? Anyone with normal hearing and vocal fold function can learn to sing. Normal hearing, for the purpose of this training, consists in being able to hear pitch inflection in the spoken voice. Normal vocal fold function involves being able to produce pitch inflection in the speaking voice. The major problem in teaching people to sing lies in overcoming years of negative self-training. People who have convinced themselves (often with the help of friends, family, and teachers) that they cannot sing must be convinced that they can sing.

Musicians usually say that someone who cannot sing in tune "has a bad ear." Recent research indicates that the ear is probably not the problem. Vocal coordination instruction (coordinating the work of the breathing mechanism, the muscles in and around the larynx, and the resonators) seems to show more promise of helping problem singers than pitch discrimination instruction (teaching subjects to match pitches one at a time). The study involved "uncertain singers" (students who had difficulty singing in tune) in grades four through six (Aaron, 1992). Freeing the muscles used in singing is likely the most effective method for teaching students to sing in tune.

Conclusion

Untrained singers (usually those who sing rock, pop, gospel, country, or Broadway show music) are at high risk of vocal abuse. Persons who use the speaking voice professionally are also at risk of vocal abuse unless they receive correct vocal training. This training is in many respects identical to that given to classical singers. Singers who receive training in the classical approach to voice (those who sing what is usually referred to as "classical" music--opera, art songs, oratorio) are usually free of major vocal problems. This is because competent teachers of the classical singing style understand how the voice works to such a high degree that they can teach their students to use their voices with the least possible amount of muscle strain.

An efficient and safe method of producing a strong, effective speaking voice is through training the singing voice using principles developed by teachers of the classical singing style. This method allows the student to reach her or his full vocal potential through the development of an acoustically resonant voice rather than through force.

Most singing instruction occurs in a one-to-one studio setting. The instructor works with one singer at a time helping correct vocal faults and producing an acoustically resonant voice capable of singing a wide range of pitches with ease and beauty. This model is impractical for most speech departments. The studio voice teachers in music departments are usually overloaded with voice (singing) majors, and can, at best, accommodate one or two non-majors. It would be impossible for them to offer singing instruction to all the speech and theatre majors who need it.

Most music departments offer courses in group voice instruction for non-majors. These classes are for music education majors (non voice majors) who must pass a proficiency examination in order to qualify for a teaching degree. The classes are typically open to students outside the music department as space allows. In many cases, part of the music department's service to the university or college consists in providing such opportunities. Teachers of the speaking voice who feel the need for their students to receive singing training should encourage them to take voice classes. Music departments should also be encouraged to make these classes widely available to non-majors.

Exercises for Developing the Voice

Posture Exercises

1. Make sure your feet are in a comfortable position. Fall forward like a rag doll (or a puppet with head and neck strings cut). Straighten up slowly, one vertebra at a time. As you do so, feel as if you are stacking the vertebrae one on top of the other.

2. Lift your hands over your head. Stretch up as tall as you can. Feel as much space as possible between the shoulders and hips. Bring your arms down slowly and let them hang at your sides. Continue to feel as much space as possible between your shoulders and your hips. Think of tall ribs and a tall neck. Keep your sternum (breastbone) high, but not so high that you can't raise it further (if you can't raise it a little, it's too high, which will produce unwanted tension).

3. Shoulder rolls. Shoulder lifts. This exercise should be repeated any time during an instruction period that the instructor ascertains the subjects have tension in the shoulders.

4. Make sure your feet are in a comfortable position, both side to side and front to back. Starting from the floor, create a straight upward line with your feet, your legs, your hips (pelvis), your spinal column, your shoulders and your head (Mabry, 1992). Keep your posture regal, like Queen Elizabeth (not stiff, but relaxed, as if you had been queen your whole life.

5. Your head should sit on your neck like a basketball balanced on a broomstick.

Breath Management Exercises

1. Sit in a chair. Slump forward so that your chest touches your lap. Let your arms dangle at your sides. Inhale and exhale slowly (several times). Feel how relaxed and "natural" you breathe in this position

2. Stand up. Try to duplicate that relaxed breathing. As you inhale and exhale, make sure your sternum doesn't fall, and your rib cage doesn't collapse. Inhale through your nose. Feel the cool spot in the back of your throat. Inhale through your mouth. You can feel that the cool spot is in a different place. Inhale through both your nose and your mouth. Try to feel two cool spots. Feel the air going down into the lower part of your lungs. You should be able to feel yourself filling up with air in the sides, the front, and the back. This circle of expansion is called the "breath ring".

3. Pant. Pant silently.

4. Inhale while you count to five. Suspend the breath (don't inhale, exhale, or tense up) while you count to ten. Keep the breath ring expanded. Exhale while you count to five. Keep the breath ring expanded during exhalation. Repeat this exercise several times until it feels relaxed and natural. Don't overfill with air. Take only as much as you can comfortably

inhale in five counts. Use your hands, placed apart to represent the breath ring remaining expanded until the end.

5. Inhale for five counts; suspend for five counts (keep the breath ring expanded); exhale for five counts. Do the same exercise immediately for six counts, then seven, and so on up to ten. Keep the breath ring expanded while you exhale. Don't let it collapse until the end. Use your hands, placed apart to represent the breath ring remaining expanded until the end.

6. Blow out five candles. Repeat this exercise increasing the number of candles by five each time. The upper limit should be twenty-five.

7. Exhale on an "H" as long as possible. Don't allow the breath ring to collapse.

8. Exhale on "SS" as long as possible. Don't allow the breath ring to collapse.

9. Exhale on "ZZ" as long as possible. Don't allow the breath ring to collapse.

10. Remember: efficiency is more important than capacity; try to produce the maximum resonance with the minimum breath.

Relaxation Exercises

1. Relaxing the jaw.

a. Starting at the top of your head, pull your hands slowly down the sides of your face. Feel each muscle relax all the way to your jaw.

b. Let your jaw go slack.

c. Nod your head up and down slowly. Keep your jaw slack. Feel how your jaw closes slightly when you nod forward, and opens when you nod back.

d. Open and close your jaw using your hand. Get rid of the resistance to your hand.

2. Tongue exercises.

a. Move your tongue side to side. Alternate back and forth.

b. Push your tongue as far out as you can. Pull it in as far as you can. Alternate in and out.

c. With your mouth comfortably wide open, touch your tongue to your top teeth where they meet the roof of your mouth. Touch your bottom teeth where they meet the gum. Alternate up and down. Don't move your jaw.

3. Chew. Make the biggest motions you can. Chew as if you had so much food in your mouth you couldn't close it, or as if you were a child chewing a big wad of gum.

4. Make noises, while chewing with your mouth open. Mutter--show how much you like your food. Grumble because you don't like it). Try to carry on a conversation with someone.

Phonation Exercises

1. When beginning to teach phonation, a clearly aspirated "H" will produce the proper attack, free from muscle interference or the glottal stroke.

2. Sigh out loud. Don't let your chest collapse. Make the sigh last as long as possible.

3. Say "HAH". Use a breathy "H". Make it as natural as you can, with no muscle tension. Slowly lengthen the "HAH" until you are sustaining a pitch which feels comfortable to you. Repeat several times, inhaling after each one.

3. Say "um-hum" as if someone were talking to you on the phone and you were agreeing. Slowly lengthen the "hum" until you are sustaining a pitch.

4. Bend over at the waist. Hum. Sing "HOH" on a pitch which feels comfortable to you. Sing "YUH" five times on a pitch which feels comfortable to you. Don't breathe between the five repetitions. Sustain the fifth one.

Registration Exercises

1. Place the fingers on one hand on either side of your larynx. Count from one to ten out loud.. If you feel movement in the larynx as you count, you are probably forcing the voice out of the comfort range.

2. Place the tip of your tongue against the back of your lower front teeth. This is the relaxed position of the tongue (although it will not feel that way at first). Hum any pitch which feels comfortable. Sustain the hum for as long as comfortably possible (remember to support the tone by keeping the breath ring expanded). As you hum, feel your lips vibrate.

3. Hum again, supporting and sustaining the hum as in Exercise 1. Feel the hum vibrate inside your head. The more vibration you feel inside your head the more resonance you will be building into the voice.

4. Hum simple tunes or tuneless patterns. Remember to support the hum. Make sure your tongue remains in contact with the back of your lower front teeth. Be aware of the vibration inside your head.

5. Select a piece of reading material. Hum any pitch which feels comfortable to you. Hum again, and, without stopping to take a breath, begin to read the material on the same pitch you have been humming (we will refer to this as chanting). Hum again, chant, and, without stopping to take a breath, read. If you feel the pitch of your voice raise or lower appreciably when you begin to read, you are probably speaking outside of your comfortable pitch range.

To correct this, practice the humming and chanting steps of this exercise daily. Your speaking pitch will gradually move into the comfort range. At the same time you will be developing a more resonant voice.

Resonation Exercises

1. Hum on a comfortable pitch. Feel as if the hum fills your entire head (sensation only, not actual fact).

2. Hum to a vowel ("UH" first, then other vowels). Choose a pitch which feels comfortable to you.

3. Repeat the humming exercises used for registration.

Articulation Exercises

1. Whispering the text eliminates the tone entirely, and emphasizes the noise factor. This lets students know if they are producing consonants strongly enough.

2. Chanting and intoning phrases, especially those with diction difficulties, will improve speaking articulation.

3. Speaking with no consonants produces a legato phrase line. Replacing the consonants will have the effect of punctuating the line rather than interrupting it.

Students who have a need or desire to sing as part of the professional use of the voice (for example, those majoring in theatre arts) would profit immensely from private voice study, one-on-one instruction with a competent teacher of singing. Incorporating these concepts and exercises into courses intended to develop the speaking voice will provide a starting point for students to develop an acoustically resonant voice while eliminating tension in the speaking voice. Instructors who teach courses which develop the speaking voice should consider private study with a competent teacher of singing. This will help them become more expert at incorporating these and other exercises into their courses.

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